

Álvaro Corrales Cano

Senior Data Scientist - Economist

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SKILLS

Techniques: Causal Inference (panel data, RCT), Time Series Analysis (ARIMA, decomposition, forecasting), NLP (LLMs, sentiment analysis, topic modelling), Data Visualisation

Technologies: Python (numpy, pandas, scikit-learn, statsmodels, xgboost, spacy, transformers, langchain, streamlit), IBM Cloud (watsonx.ai, Watson Studio, Watson NLP, Watson Knowledge Catalog, Cognos Analytics), Excel, Stata, SQL, Git.

WORK EXPERIENCE

IBM

London, UK

Pre-sales development of MVPs with AI and Cloud technologies, using an Agile framework.

Senior Data Scientist

10/2022 – 09/2023

Client Engineering Team

- Head of a ~15-people team of Data Scientists and Engineers. Designed selection process and interviewed candidates for Data Scientist and AI Engineer positions. Mentored and upskilled junior colleagues. Organised biweekly seminars.
- Facilitation of client workshops for business framing, data discovery and MVP solutioning. Interaction with C-level stakeholders, department leaders and development teams.

Selected projects:

- Led a squad that developed an algorithm to identify non-compliant IT controls for major UK bank. Used sentence encoding with cosine similarity, entity extraction and logical rules. Automated manual process, with a two-order-of-magnitude increase in controls processed.
- Led a squad that developed a data governance framework for major UK bank. Created business terms, categories, data privacy rules and automated data quality assessments and profiling.
- Led a team that participated in TM Forum Bangkok conference with a demo on MLOps. Demonstrated AI model lifecycle, from training, to deployment and monitoring. Awarded second prize for most innovative project.

Data Scientist

04/2021 – 09/2022

Client Engineering Team

Selected projects:

- Led a squad that developed a tool for auditing customer calls for a major UK bank. The tool contained a pipeline combining speech to text, sentiment analysis and topic modelling; output displayed in a dashboard. Improvement of up to 15 p.p. in transcription accuracy over existing solution.
- Developed a dashboard for an NHS trust in the UK to visualise internal governance metrics and predict future performance using time series models.

Data Scientist

11/2019 – 03/2021

Cloud Pak Acceleration Team

Selected projects:

- Emergent Alliance (open-source initiative). Co-authored a model of the economy to study how economic shocks propagate across economic sectors using input-output tables. Github repository [here](#).

Charles River Associates

London, UK

Economic consulting in mergers and abuse of dominance cases.

Consulting Associate

08/2018 – 07/2019

European Competition Practice

- Successfully advised PayPal in its acquisition of iZettle, a company in the card payments industry, in a \$2.2bn operation.
- Worked on other confidential cases in the tech, air transport and natural gas sectors in front of the UK's and the EU's competition authorities.

Neovantas Consulting

Madrid, Spain

Management consulting

Business Analyst – Data Analyst

01/2016 – 08/2017

- Led a lighthouse project for the design and implementation of a debt recovery strategy for a collection agency using speech analytics and econometrics. Improvement of up to +29 p.p. in collection ratios. Started this project as an intern; after one year, I was leading a team of three people, including client-facing responsibilities.

PUBLICATIONS

An Introduction to Time Series, Educative

11/2023

A 40-lesson online course on Time Series analysis with Python. It introduces concepts such as stochasticity, stationarity, and autocorrelation; time series moments and visualisation; forecasting with ARIMA models. It uses the library statsmodels to illustrate concepts in +80 code widgets.

URL: *Forthcoming late November 2023*

Educative is a hands-on learning platform for software developers offering text-based courses.

EDUCATION

Barcelona School of Economics
MSc in Economics and Finance

Barcelona, Spain
2017 - 2018

Universidad Carlos III de Madrid
BA in Economics

Madrid, Spain
2012 - 2016

University of California, Berkeley
BA in Economics, year abroad

Berkeley, CA, US
2014 – 2015

LANGUAGES

- **Spanish** – Native
- **English** – Full proficiency
- **French** – Intermediate